CLAIMS:

1. An implantable direct cardiac compression device comprising:

a body having a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said cardiac compression wall being adapted to be affixed to the wall of a ventricle of a heart and to compress the ventricle upon pressurisation of said chamber, said rear wall being stiffer than said cardiac compression wall, said body having two opposing lateral sides; and

two flexible flaps, one of said flaps extending from one of said lateral sides of said body and the other of said flaps extending from the other of said lateral sides of said body, said flaps being adapted to be affixed to the ventricle wall.

2. The device of claim 1 wherein said cardiac compression wall and said flaps each have a surface layer formed of a biointegratable material for affixing to the ventricle wall by biointegrating with the ventricle wall.

3. The device of claim 1 wherein each of said flaps is able to be trimmed with the use of scissors or the like.

4. The device of claim 1 wherein said cardiac compression wall is adapted to be affixed to the left ventricle of a heart.

5. The device of claim 2 wherein said flaps each comprise said flap surface layer and a reinforcing layer secured to said flap surface layer for suturing to the pericardium encasing the heart.

6. A method of treating a failing heart comprising the steps of:

creating an incision through the chest of a patient to be treated, said incision extending through the pericardium of the patient;

introducing a left implantable direct cardiac compression (DCC) device through said incision into the pericardial space of the patient, said left DCC device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said left DCC device rear wall being stiffer than said left DCC device cardiac compression wall, said left DCC device further having two flexible flaps, one said flap extending from one lateral side of said left DCC device body and the other of said flaps extending from an opposing lateral side of said left DCC device body;

introducing a right direct cardiac compression (DCC) device through said incision into the pericardial space of the patient, said right DCC device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said right DCC device rear wall being stiffer than said right DCC device cardiac compression wall;

securing said right DCC device cardiac compression wall to the right ventricle of the heart;

securing said left DCC device cardiac compression wall and flaps to the left ventricle of the heart;

periodically pressurising said chamber of each of said left and right DCC devices to assist contraction of the left and right ventricles during systole.

7. The method of claim 6 further comprising the step of securing each of said flaps to the pericardium on opposing sides of said incision.

8. The method of claim 6 wherein said right DCC device cardiac compression wall and said left DCC device cardiac compression wall and flaps are secured to the right and left ventricles respectively by biointegrating with the right and left ventricles respectively.

9. An implantable direct cardiac compression system comprising:

a left implantable direct cardiac compression (DCC) device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said left DCC device cardiac compression wall being adapted to be affixed to the left ventricle of a heart and to compress the left ventricle upon pressurisation of said left DCC device chamber, said left DCC device rear wall being stiffer said left DCC device cardiac compression wall;

a right implantable direct cardiac compression (DCC) device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said right DCC device cardiac compression wall being adapted to be affixed to the right ventricle of the heart and to compress the right ventricle upon pressurisation of said right DCC device chamber, said right DCC device rear wall being stiffer than said right DCC device cardiac compression wall;

wherein said body of one of said DCC devices is provided with at least one strap extending from opposing lateral sides thereof and adapted to extend around the heart and said body of the other of said DCC devices in use.

10. The system of claim 9 wherein said right DCC device comprises said one DCC device and said left DCC device comprises said other DCC device.

11. The system of claim 10 wherein said left DCC device is provided with one or more eyelets adapted to receive said straps.

12. The system of claim 9 wherein said straps are formed of a bioabsorbable material.

13. The system of claim 10 wherein said right DCC device is provided with two said straps each extending from each lateral side of said right DCC device body.

14. The system of claim 9 wherein said cardiac compression wall of each said DCC device has a surface layer formed of a biointegratable material for affixing to the respective ventricle wall by biointegrating with the respective ventricle wall.

15. The system of claim 9 wherein said left DCC device is provided with two flexible flaps, one of said flaps extending from a lateral side of said body and the other said flaps extending from an opposing lateral side of said body, said flaps adapted to be fixed to the left ventricle wall.

16. The system of claim 15 wherein each of said flaps is able to be trimmed with the use of scissors or the like.

17. The system of claim 15 wherein said flaps each have a surface layer formed of a biointegratable material for affixing to the left ventricle wall by biointegrating with the left ventricle wall.

18. A method of treating a failing heart comprising the steps of:

creating an incision through the chest of a patient to be treated, said incision extending through the pericardium of the patient;

introducing a left implantable direct cardiac compression (DCC) device through said incision into the pericardial space of the patient, said left DCC device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said left DCC device rear wall being stiffer than said left DCC device cardiac compression wall;

introducing a right direct cardiac compression (DCC) device through said incision into the pericardial space of the patient, said right DCC device having a body comprising a flexible frontal cardiac compression wall and a rear wall together defining a pressurisable chamber, said right DCC device rear wall being stiffer than said right DCC device cardiac compression wall, said right DCC device being provided with at least one strap extending from opposing lateral sides of said right DCC device body;

positioning said right DCC device cardiac compression wall against the right ventricle of the heart;

positioning said left DCC device cardiac compression wall against the left ventricle of the heart,

extending said strap(s) around the heart and the left DCC device body;

fastening said strap(s) to secure said left and right DCC devices to the left and right ventricles respectively; and

periodically pressurising said chamber of each of said left and right DCC devices to assist contraction of the left and right ventricles during systole.

19. The method of claim 18 wherein said strap(s) is/are threaded through at least one eyelet provided on the left DCC device.

20. The method of claim 18 wherein said left and right DCC devices are further secured to the left and right ventricles by biointegration of said cardiac compression walls with the ventricles.

21. The method of claim 18 wherein said left DCC device is provided with two flexible flaps, one said flap extending from a lateral side of said left DCC device body, the other said flap extending from an opposing lateral side of said left DCC body, said method further comprising the step of securing said flaps to the left ventricle.

22. The method of claim 18 wherein said flaps are trimmed prior to being introduced.